ELSEVIER

Journal of Organometallic Chemistry 536–537 (1997) 553–554

Journal of Organometallic Chemistry

Author Index of Volumes 536–537

Afanasova, O.B., 31
Akhrem, I.S., 489
Akkerman, O.S., 217
Al-Mandhary, M.R.A., 549
Allinger, N.L., 481
Almazova, O.G., 457
Antipin, M.Yu., 191, 281
Atovmyan, L.O., 531
Auner, N., 375
Avtomonov, E., 361

Baukov, Yu.I., 399
Baumann, W., 293
Belkova, N.V., 17
Belsky, V.K., 87, 207, 433
Berke, H., 139
Bianchi, M., 123
Bickelhaupt, F., 217
Błaszczyk, J., 355
Bochkarev, M.N., 457
Borup, B., 109
Bregadze, V.I., 223, 405, 519
Broussier, R., 531
Brown, D.B., 285
Bruce, M.I., 93
Bruckmann, J., 465
Buchowicz, W., 249
Budnikova, Y.H., 265
Bujacz, G.D., 355
Bukalov, S.S., 425, 519
Burlakov, V.V., 293

Caliman, V., 273
Campanelli, A.R., 309
Caulton, K.G., 109, 139
Cauzzi, D., 497
Cherepanov, I.A., 437
Chernyshev, E.A., 31
Chistyakov, A.L., 413, 489
Chizhevsky, I.T., 51, 223, 405
Curtis, M.A., 115

Delarge, J., 405
Demonceau, A., 405
Demtschuk, J., 541
Denisov, V.R., 339
Dolgushin, F.M., 165, 223, 339, 345, 381, 405
Domenicano, A., 309

Ellert, O.G., 433
Epstein, L.M., 17
Erbstein, F., 541

Elsevier Science S.A.

Eremenko, I.L., 139, 433

Faggi, C., 123
Felekidis, A., 405
Fontaine, M., 405
Frediani, P., 123
Fukin, G.K., 457

Gambaryan, N.P., 413, 489
Garbuzova, I.A., 425
Gautheron, B., 531
Ginzburg, A.G., 165
Głowiak, T., 249
Goblet-Stachow, M., 405
Golovchenko, L.S., 385
Golubinskaya, L.M., 519
Grachova, E.V., 339
Graczyk, P.P., 355
Graiff, C., 497
Grimes, R.N., 115
Gusev, D.G., 139
Gusev, O.V., 191, 281

Haaland, A., 217
Hahn, F., 375
Hargittai, I., 309
Hawthorne, M.F., 223
Herrschaft, B., 375
Hitchcock, P.B., 273, 473
Hondrogiannis, G., 327
Houser, E.J., 115
Hu, J., 473
Huffman, J.C., 109, 139
Hursthouse, M.B., 509

Ianelli, S., 123

John, P., 375
Johnson, B.F.G., 285

Kabalka, G.W., 327
Kabir, S.E., 509
Kalinin, V.N., 437
Kamyshova, A.A., 257
Kargin, Yu.M., 265
Kazennova, N., 361
Kempe, R., 293
Khvorost, A., 361
King, R.B., 7
Kirillova, N.I., 31
Kiseleva, L.N., 257

Knizhnikov, V.A., 181
Knobler, C.B., 223
Kompan, O.E., 233
Koridze, A.A., 381
Kotov, V., 361
Kozachkov, S.G., 207
Kramarova, E.P., 399
Kravtsov, D.N., 385
Kreindlin, A.Z., 257
Kron, T.E., 207
Krüger, C., 465
Kruglova, N.V., 257
Kuhlman, R., 139
Künzel, A., 177
Kurbakova, A.P., 519

Lanfranchi, M., 497
Lappert, M.F., 473
Lebedev, V.N., 537
Leites, L.A., 425, 519
Lemenovskii, D., 361
Lewis, J., 549
Li, S.-l., 73
Liégeois, J.F., 405
Lorberth, J., 361

Łuczak, T., 355

Lyssenko, K.A., 191, 281

Maier, N.A., 181
Maitlis, P.M., 191
Majzner, W.R., 355
Mak, T.C.W., 73
Maletin, Yu.A., 207
Malik, K.M.A., 509
Mangette, J., 425
Manojlovic-Muir, L., 319
Martin, C.M., 285
Micha-Screttas, M., 149
Mikołajczyk, M., 355
Minkin, V.I., 233
Mkoyan, S.G., 531
Moiseev, S.K., 437
Morozova, L.N., 191
Muir, K.W., 319
Mullica, D.F., 537

Nardelli, M., 123
Nefedov, S.E., 433
Negrebetsky, V.V., 399

Nikol'skii, A.B., 339
Nivorozhkin, V.L., 233
Nixon, J.F., 273
Noels, A.F., 191, 405

Ohashi, Y., 389
O'Leary, S.R., 191
Osintseva, S.V., 345
Ovchinnikov, Yu.E., 399

Pachevskaya, V.M., 385
Pakusina, A.P., 87
Papaleo, S., 123
Parisini, E., 177
Parsons, S., 285
Pasynkiewicz, S., 249
Pasynskii, A.A., 433
Peganova, T.A., 191, 281
Peregudov, A.S., 385
Perron, P., 531
Petrovskii, P.V., 257, 345, 381
Peulecke, N., 293
Piacenti, F., 123
Pietrzykowski, A., 249
Pirotte, B., 405
Pisareva, I.V., 223
Poletaeva, I., 197
Predieri, G., 497
Protchenko, A.V., 457

Raithby, P.R., 549
Ramondo, F., 309
Rivkin, B.B., 233
Robert, F., 531
Roesky, H.W., 177
Roodt, A., 197
Rosair, G.M., 299
Rosenthal, U., 293
Rufanov, K., 361

Ryabtsev, A.N., 181
Rybin, L.V., 345
Rybinskaya, M.I., 257, 345

Sabat, M., 115
Sadekov, I.D., 233
Salvini, A., 123
Samdal, S., 217
Sappenfield, E.L., 537
Schumann, H., 541
Screttas, C.G., 149
Sekine, A., 389
Sharutin, V.V., 87
Sharutina, O.K., 87
Sheldrick, G.M., 177
Sheloumov, A.M., 381
Shipov, A.G., 399
Shirokii, V.L., 181
Shubina, E.S., 17
Shur, V.B., 413
Skelton, B.W., 93
Sokolov, V.I., 165
Spannenberg, A., 293
Spitzner, H., 425
Stankevich, I.V., 413, 489
Starova, G.L., 339
Stastch, A.I., 433
Steele, B.R., 149
Steyn, G.J.J., 197
Stone, F.G.A., 537
Strand, T.G., 217
Struchkov, Yu.T., 31, 51, 65, 223, 233, 281, 339, 345, 381, 399, 405, 413, 457
Suponitsky, K.Yu., 481
Suprunovich, S.V., 165

Tafipolsky, M.A., 217
Tatsuki, H., 389
Tian, S., 473

Tikhonova, I.A., 413
Timofeeva, T.V., 481
Tiripicchio, A., 497
Torabi, A.A., 319
Torubaev, Y.V., 433
Tunik, S.P., 339
Turpeinen, U., 257

Urazowski, I.F., 531
Ustynyuk, N.A., 281

Vahrenkamp, H., 509
Van de Heisteeg, B.J.J., 217
Varshavsky, Y.S., 197
Volden, H.V., 217
Voloshin, Y.Z., 207
Vol'pin, M.E., 489
Vorontsov, E.V., 165
Vorontzov, E.V., 223

Weimann, R., 541
Weis, J., 375
Welch, A.J., 299
Weller, A.S., 299
West, R., 425
White, A.H., 93
Wieczorek, M.W., 355

Yanovsky, A.I., 51, 165, 223, 339, 345, 381, 405, 413, 481

Zahn, S.K., 299
Zaitseva, N.N., 93
Zakharov, A.V., 233
Zakharov, L.N., 65, 457
Zavodnik, V.E., 207
Zhang, Z.-Z., 73
Ziche, W., 375
Zinevich, T.V., 405

ELSEVIER

Journal of Organometallic Chemistry 536–537 (1997) 555–565

Journal of Organometallic Chemistry

Subject Index of Volumes 536–537

Ab initio
The MM3 force field for 12-vertex boranes and carboranes (T.V. Timofeeva, K.Yu. Suponitsky, A.I. Yanovsky and N.L. Allinger), 481

Ab initio MO calculations
Molecular structure and conformation of trimethylsilylbenzene: a study by gas-phase electron diffraction and theoretical calculations (A.R. Campanelli, F. Ramondo, A. Domenicano and I. Hargittai), 309

Agostic
Organotransition-metal metallacarboranes. 45. Synthesis and structure of hydridoruthenacarborane double-decker and triple-decker sandwich complexes (E.J. Houser, M.A. Curtis, M. Sabat and R.N. Grimes), 115

Alkenylcarboranes
Directive effects in the hydroboration of 1-alkenyl derivatives of *o*-carborane with representative hydroborating agents (G.W. Kabalka and G. Hondrogiannis), 327

Alkoxide
A heterometallic alkoxide combining hard and soft Lewis acids $(Et_3PO)_2Ba_2Cu_4(O^tBu)_8$ (B. Borup, J.C. Huffman and K.G. Caulton), 109

Alkyne
Reactions of the phenyl-substituted five-membered titanacyclocumulene – unusual coupling of a 1,4-disubstituted 1,3-butadiyne with two titanium atoms (V.V. Burlakov, N. Peulecke, W. Baumann, A. Spannenberg, R. Kempe and U. Rosenthal), 293

Synthesis and structure of the heteronuclear alkyne cluster $RuOs_3(\mu_4\text{-}HC_2Me)(CO)_{12}$ (A.A. Koridze, A.M. Sheloumov, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 381

Aluminum halides
Polyhalomethanes combined with aluminum halides as generators of superelectrophiles of a novel type (I.S. Akhrem, A.L. Chistyakov, N.P. Gambaryan, I.V. Stankevich and M.E. Vol'pin), 489

Anomeric effect
Solid state conformation of the anomeric effect in 2-phosphoryl-, 2-thiophosphoryl- and 2-selenophosphoryl-substituted 1,3-dithiolanes (M. Mikołajczyk, T. Łuczak, P.P. Graczyk, M.W. Wieczorek, J. Błaszczyk, G.D. Bujacz and W.R. Majzner), 355

Antiferromagnetic behaviour
Antiferromagnetic complexes with the metal–metal bond. XXVIII. Synthesis and molecular structure of the antiferromagnetic cluster $[CpCr(\mu\text{-}SCMe_3)]_2(\mu_4\text{-}S)[PtMe_3(\mu\text{-}I)]_2$ (A.A. Pasynskii, Y.V. Torubaev, S.E. Nefedov, I.L. Eremenko, O.G. Ellert, V.K. Belsky and A.I. Stastch), 433

Antimony
Reactions of pentaphenylantimony with dicarboxylic acids (V.V. Sharutin, O.K. Sharutina, A.P. Pakusina and V.K. Belsky), 87

Arsenic
Polyelement substituted cyclopentadienes and indenes – novel ligand precursors for organotransition metal chemistry (K. Rufanov, E. Avtomonov, N. Kazennova, V. Kotov, A. Khvorost, D. Lemenovskii and J. Lorberth), 361

1-Aza-allyl
Organometallic chemistry of the actinides. Part 3. Novel 1-aza-allyl- and β-diketiminatothorium chlorides; X-ray structures of $[\{Th(LL')_2(\mu_3\text{-}Cl)(\mu\text{-}Cl)_2K(OEt_2)\}_n]$ and $[Th(LL)_2Cl_2]$ [LL' = $N(SiMe_3)C(Bu^t)C(H)SiMe_3$; LL = $\{N(SiMe_3)C(Ph)\}_2CH$] (P.B. Hitchcock, J. Hu, M.F. Lappert and S. Tian), 473

Barium
A heterometallic alkoxide combining hard and soft Lewis acids $(Et_3PO)_2Ba_2Cu_4(O^tBu)_8$ (B. Borup, J.C. Huffman and K.G. Caulton), 109

Benzylic functionalization
Benzylic functionalization of $(\eta^6$-alkylarene)chromium tricarbonyl complexes (V.N. Kalinin, I.A. Cherepanov and S.K. Moiseev), 437

Bicyclic systems
Reactions of dodecacarbonyltriruthenium with unsaturated α,β-diketones (M.I. Rybinskaya, L.V. Rybin, S.V. Osintseva, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 345

Bicymantrenyl
Metallation of bicymantrenyl and synthesis of polycymantrenyls (A.G. Ginzburg, S.V. Suprunovich, F.M. Dolgushin, A.I. Yanovsky, E.V. Vorontsov and V.I. Sokolov), 165

π-Bonding
Dihydrogen addition to $(P^iPr_3)_2OsX_nH_{4-n}$ (R. Kuhlman, D.G. Gusev, I.L. Eremenko, H. Berke, J.C. Huffman and K.G. Caulton), 139

Borane–THF
Directive effects in the hydroboration of 1-alkenyl derivatives of *o*-carborane with representative hydroborating agents (G.W. Kabalka and G. Hondrogiannis), 327

Boron
Directive effects in the hydroboration of 1-alkenyl derivatives of *o*-carborane with representative hydroborating agents (G.W. Kabalka and G. Hondrogiannis), 327

Ligand effects in the hydrogenation of methacycline to doxycycline and epi-doxycycline catalysed by rhodium complexes. Molecular structure of the key catalyst [*closo*-3,3-($\eta^{2,3}$-$C_7H_7CH_2$)-3,1,2-$RhC_2B_9H_{11}$] (A. Felekidis, M. Goblet-Stachow, J.F. Liégeois, B. Pirotte, J. Delarge, A. Demonceau, M. Fontaine, A.F. Noels, I.T. Chizhevsky, T.V. Zinevich, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 405

Organotransition-metal metallacarboranes. 45. Synthesis and structure of hydridoruthenacarborane double-decker and triple-decker sandwich complexes (E.J. Houser, M.A. Curtis, M. Sabat and R.N. Grimes), 115

Polyelement substituted cyclopentadienes and indenes – novel ligand precursors for organotransition metal chemistry (K. Rufanov, E. Avtomonov, N. Kazennova, V. Kotov, A. Khvorost, D. Lemenovskii and J. Lorberth), 361

Elsevier Science S.A.

Semi-sandwich platinum metals metallacarboranes derived from *nido*-$C_2B_9H_{12}^-$: chemistry and structural studies (I.T. Chizhevsky, A.I. Yanovsky and Yu.T. Struchkov), 51

Sterically encumbered charge-compensated carbaboranes: synthesis and reactivity. Molecular structures of 7-Ph-11-SMe_2-7,8-*nido*-$C_2B_9H_{10}$ and 1-Ph-3,3-$(CO)_2$-7-SMe_2-3,1,2-*closo*-$RhC_2B_9H_8$ (G.M. Rosair, A.J. Welch, A.S. Weller and S.K. Zahn), 299

Synthesis and characterization of the first charge-compensated monocarbollide(octacarbonyl)triosmium complex (V.N. Lebedev, D.F. Mullica, E.L. Sappenfield and F.G.A. Stone), 537

Synthesis, structure and reactivity of a novel monocarbon hydridorhodacarborane *closo*-2,2-$(Ph_3P)_2$-2-*H*-1-(Me_3N)-2,1-$RhCB_{10}H_{10}$. Molecular structure of 16-electron *closo*-2-(Ph_3P)-2-Cl-1-(Me_3N)-2,1-$RhCB_{10}H_{10}$ and closely related 18-electron *closo*-3,3-$(Ph_3P)_2$-3-Cl-3,1,2-$RhC_2B_9H_{11}$ (I.T. Chizhevsky, I.V. Pisareva, E.V. Vorontzov, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov, C.B. Knobler and M.F. Hawthorne), 223

The MM3 force field for 12-vertex boranes and carboranes (T.V. Timofeeva, K.Yu. Suponitsky, A.I. Yanovsky and N.L. Allinger), 481

Cage compounds

Template synthesis, structure and electrochemistry of trinuclear iron(II) clathrochelate dioximates with ferrocenylboron fragments (Y.Z. Voloshin, T.E. Kron, V.K. Belsky, V.E. Zavodnik, Yu.A. Maletin and S.G. Kozachkov), 207

Carbaboranes

Sterically encumbered charge-compensated carbaboranes: synthesis and reactivity. Molecular structures of 7-Ph-11-SMe_2-7,8-*nido*-$C_2B_9H_{10}$ and 1-Ph-3,3-$(CO)_2$-7-SMe_2-3,1,2-*closo*-$RhC_2B_9H_8$ (G.M. Rosair, A.J. Welch, A.S. Weller and S.K. Zahn), 299

Synthesis, structure and reactivity of a novel monocarbon hydridorhodacarborane *closo*-2,2-$(Ph_3P)_2$-2-*H*-1-(Me_3N)-2,1-$RhCB_{10}H_{10}$. Molecular structure of 16-electron *closo*-2-(Ph_3P)-2-Cl-1-(Me_3N)-2,1-$RhCB_{10}H_{10}$ and closely related 18-electron *closo*-3,3-$(Ph_3P)_2$-3-Cl-3,1,2-$RhC_2B_9H_{11}$ (I.T. Chizhevsky, I.V. Pisareva, E.V. Vorontzov, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov, C.B. Knobler and M.F. Hawthorne), 223

Carbonyl

Behaviour of triphenylphosphine-substituted ruthenium carbonyl carboxylates with hydrogen (P. Frediani, C. Faggi, S. Papaleo, A. Salvini, M. Bianchi, F. Piacenti, S. Ianelli and M. Nardelli), 123

Metallation of bicymantrenyl and synthesis of polycymantrenyls (A.G. Ginzburg, S.V. Suprunovich, F.M. Dolgushin, A.I. Yanovsky, E.V. Vorontsov and V.I. Sokolov), 165

Novel generation of organometallic systems. Metal carbonyl complexes with silacarbacyclic π-ligands, synthetic and structural investigations (O.B. Afanasova, N.I. Kirillova, E.A. Chernyshev and Yu.T. Struchkov), 31

Preparation and thermolysis of complexes derived from some trinuclear ruthenium clusters and 1,4-diphenylbuta-1,3-diyne (M.I. Bruce, N.N. Zaitseva, B.W. Skelton and A.H. White), 93

Structural correlation between Rh–P and Rh–C bond distances vs. ^{31}P and ^{13}C NMR parameters in monocarbonylphosphinerhodium(I) complexes: crystal structure of (methyl 2-(amino)-1-cyclopentene-1-dithiocarboxylato-$\kappa N,\kappa S$)-carbonyl(triphenylphosphine)rhodium(I) (G.J.J. Steyn, A. Roodt, I. Poletaeva and Y.S. Varshavsky), 197

Synthesis and characterization of the first charge-compensated monocarbollide(octacarbonyl)triosmium complex (V.N. Lebedev, D.F. Mullica, E.L. Sappenfield and F.G.A. Stone), 537

Synthesis and structural characterisation of $[Os_4H_2(CO)_{11}\{Au_2(DPPM)\}_2]$: the first cluster with an Os_4Au_4 core (M.R.A. Al-Mandhary, J. Lewis and P.R. Raithby), 549

Synthesis and structure of β-tellurovinylcarbonyl compounds (V.I. Minkin, I.D. Sadekov, B.B. Rivkin, A.V. Zakharov, V.L. Nivorozhkin, O.E. Kompan and Yu.T. Struchkov), 233

Synthesis and structure of the heteronuclear alkyne cluster $RuOs_3(\mu_4\text{-}HC_2Me)(CO)_{12}$ (A.A. Koridze, A.M. Sheloumov, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 381

Synthesis of diphosphine-substituted selenido carbonyl iron clusters: progressive deformation of the Fe_3Se_2 core in the *nido* clusters $[Fe_3Se_2(CO)_7\{\mu\text{-}(Ph_2P)_2R\}]$ by widening the bite of the bridging ligand (D. Cauzzi, C. Graiff, M. Lanfranchi, G. Predieri and A. Tiripicchio), 497

The interaction of unsaturated C_8-ring systems with ruthenium carbonyl clusters (D.B. Brown, B.F.G. Johnson, C.M. Martin and S. Parsons), 285

The new organometallic polydentate ligand *trans*-bis(2-(diphenylphosphino)pyrimidine)tricarbonyliron(0) and its mono-, di- and tridentate coordination modes towards mercury(II) halide/pseudohalide (S.-I. Li, Z.-Z. Zhang and T.C.W. Mak), 73

Carborane

Organotransition-metal metallacarboranes. 45. Synthesis and structure of hydridoruthenacarborane double-decker and triple-decker sandwich complexes (E.J. Houser, M.A. Curtis, M. Sabat and R.N. Grimes), 115

Synthesis and characterization of the first charge-compensated monocarbollide(octacarbonyl)triosmium complex (V.N. Lebedev, D.F. Mullica, E.L. Sappenfield and F.G.A. Stone), 537

o-Carborane

Directive effects in the hydroboration of 1-alkenyl derivatives of *o*-carborane with representative hydroborating agents (G.W. Kabalka and G. Hondrogiannis), 327

Catalysis

Synthesis and characterisation of trifluoro(η^5-*n*-propyltetramethylcyclopentadienyl)metal(IV)-compounds of the elements of Group IV (A. Künzel, E. Parisini, H.W. Roesky and G.M. Sheldrick), 177

Cations

Polyhalomethanes combined with aluminum halides as generators of superelectrophiles of a novel type (I.S. Akhrem, A.L. Chistyakov, N.P. Gambaryan, I.V. Stankevich and M.E. Vol'pin), 489

C–H bond activation

The activation of C–H bonds in terminal olefins by cyclopentadienylnickel species (S. Pasynkiewicz, W. Buchowicz, A. Pietrzykowski and T. Głowiak), 249

Chelating phosphines

Chelating organophosphines: the use of comparative structural investigations to determine ligand properties (J. Bruckmann and C. Krüger), 465

Chemical hardness

The influence of aryl ligands on the chemical hardness of triarylitin cations (D.N. Kravtsov, A.S. Peregudov, V.M. Pachevskaya and L.S. Golovchenko), 385

Chiral crystal

Crystalline-state β–α photoisomerization of cobaloxime complexes, part 1. Generation of asymmetry in chiral crystal environment (A. Sekine, H. Tatsuki and Y. Ohashi), 389

Chromium

Antiferromagnetic complexes with the metal–metal bond. XXVIII. Synthesis and molecular structure of the antiferromagnetic cluster $[CpCr(\mu\text{-}SCMe_3)]_2(\mu_4\text{-}S)[PtMe_3(\mu\text{-}I)]_2$ (A.A. Pasynskii, Y.V. Torubaev, S.E. Nefedov, I.L. Eremenko, O.G. Ellert, V.K. Belsky and A.I. Stastch), 433

Benzylic functionalization of (η^6-alkylarene)chromium tricarbonyl complexes (V.N. Kalinin, I.A. Cherepanov and S.K. Moiseev), 437

(η^6-Arene)chromium tricarbonyl complexes
Benzylic functionalization of (η^6-alkylarene)chromium tricarbonyl complexes (V.N. Kalinin, I.A. Cherepanov and S.K. Moiseev), 437
Cluster
Organotransition-metal metallacarboranes. 45. Synthesis and structure of hydridoruthenacarborane double-decker and triple-decker sandwich complexes (E.J. Houser, M.A. Curtis, M. Sabat and R.N. Grimes), 115
Reactivity of the electron deficient compound $[(\mu\text{-H})Os_3(CO)_9(\mu_3\text{-}\eta^2\text{-}C_9H_5(CH_3)N)]$ with thiols (S.E. Kabir, H. Vahrenkamp, M.B. Hursthouse and K.M.A. Malik), 509
Structure of a Pt/Re cluster complex: aggregation of ions in crystals of $[Pt_3\{Re(CO)_2P(OMe)_3\}(\mu_3\text{-}O)_2(\mu\text{-dppm})_3][AsF_6]$ (K.W. Muir, L. Manojlovic-Muir and A.A. Torabi), 319
Synthesis and structural characterisation of $[Os_4H_2(CO)_{11}\{Au_2(DPPM)\}_2]$: the first cluster with an Os_4Au_4 core (M.R.A. Al-Mandhary, J. Lewis and P.R. Raithby), 549
Synthesis and structure of the heteronuclear alkyne cluster $RuOs_3(\mu_4\text{-}HC_2Me)(CO)_{12}$ (A.A. Koridze, A.M. Sheloumov, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 381
Clusters
Behaviour of triphenylphosphine-substituted ruthenium carbonyl carboxylates with hydrogen (P. Frediani, C. Faggi, S. Papaleo, A. Salvini, M. Bianchi, F. Piacenti, S. Ianelli and M. Nardelli), 123
Preparation and thermolysis of complexes derived from some trinuclear ruthenium clusters and 1,4-diphenylbuta-1,3-diyne (M.I. Bruce, N.N. Zaitseva, B.W. Skelton and A.H. White), 93
Reactions of diacetylene ligands with trinuclear clusters. II. Reactions of hexa-2,4-diyne-1,6-diol and 1,4-diphenyl-1,3-butadiyne with $Ru_3(CO)_{12}$ (S.P. Tunik, E.V. Grachova, V.R. Denisov, G.L. Starova, A.B. Nikol'skii, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 339
Synthesis of diphosphine-substituted selenido carbonyl iron clusters: progressive deformation of the Fe_3Se_2 core in the *nido* clusters $[Fe_3Se_2(CO)_7\{\mu\text{-}(Ph_2P)_2R\}]$ by widening the bite of the bridging ligand (D. Cauzzi, C. Graiff, M. Lanfranchi, G. Predieri and A. Tiripicchio), 497
The interaction of unsaturated C_8-ring systems with ruthenium carbonyl clusters (D.B. Brown, B.F.G. Johnson, C.M. Martin and S. Parsons), 285
Cobaloxime
Crystalline-state β–α photoisomerization of cobaloxime complexes, part 1. Generation of asymmetry in chiral crystal environment (A. Sekine, H. Tatsuki and Y. Ohashi), 389
Cobalt
Crystalline-state β–α photoisomerization of cobaloxime complexes, part 1. Generation of asymmetry in chiral crystal environment (A. Sekine, H. Tatsuki and Y. Ohashi), 389
The electrochemical synthesis of η^5-cyclopentadienylcobalt-η^4-tetraphenylbutadiene and its reaction with iodine in the presence of electron donor ligands (V.A. Knizhnikov, V.L. Shirokii, A.N. Ryabtsev and N.A. Maier), 181
Complexes
Crown compounds for anions. A new approach to the description of chemical bonds in the complexes of halide anions with polymercury-containing macrocycles [1] (A.L. Chistyakov, I.V. Stankevich, N.P. Gambaryan, Yu.T. Struchkov, A.I. Yanovsky, I.A. Tikhonova and V.B. Shur), 413
Cone angle
Chelating organophosphines: the use of comparative structural investigations to determine ligand properties (J. Bruckmann and C. Krüger), 465
Copper
A heterometallic alkoxide combining hard and soft Lewis acids $(Et_3PO)_2Ba_2Cu_4(O^tBu)_8$ (B. Borup, J.C. Huffman and K.G. Caulton), 109
Crystal
Structural correlation between Rh–P and Rh–C bond distances vs. ^{31}P and ^{13}C NMR parameters in monocarbonylphosphinerhodium(I) complexes: crystal structure of (methyl 2-(amino)-1-cyclopentene-1-dithiocarboxylato-$\kappa N,\kappa S$)-carbonyl(triphenylphosphine)rhodium(I) (G.J.J. Steyn, A. Roodt, I. Poletaeva and Y.S. Varshavsky), 197
Crystal structure
Antiferromagnetic complexes with the metal–metal bond. XXVIII. Synthesis and molecular structure of the antiferromagnetic cluster $[CpCr(\mu\text{-}SCMe_3)]_2(\mu_4\text{-}S)[PtMe_3(\mu\text{-}I)]_2$ (A.A. Pasynskii, Y.V. Torubaev, S.E. Nefedov, I.L. Eremenko, O.G. Ellert, V.K. Belsky and A.I. Stastch), 433
Behaviour of triphenylphosphine-substituted ruthenium carbonyl carboxylates with hydrogen (P. Frediani, C. Faggi, S. Papaleo, A. Salvini, M. Bianchi, F. Piacenti, S. Ianelli and M. Nardelli), 123
Crystalline-state β–α photoisomerization of cobaloxime complexes, part 1. Generation of asymmetry in chiral crystal environment (A. Sekine, H. Tatsuki and Y. Ohashi), 389
Dihydrogen addition to $(P^iPr_3)_2OsX_nH_{4-n}$ (R. Kuhlman, D.G. Gusev, I.L. Eremenko, H. Berke, J.C. Huffman and K.G. Caulton), 139
Metallation of bicymantrenyl and synthesis of polycymantrenyls (A.G. Ginzburg, S.V. Suprunovich, F.M. Dolgushin, A.I. Yanovsky, E.V. Vorontsov and V.I. Sokolov), 165
Novel Group 4b *ansa*-metallocene complexes with the shortest bridge: [1,1'-isopropylydene-3,3'-di-t.Bu-bis(η^5-cyclopentadienyl)] Ti and Zr dichlorides (I.F. Urazowski, L.O. Atovmyan, S.G. Mkoyan, R. Broussier, P. Perron, B. Gautheron and F. Robert), 531
Organometallic chemistry of the actinides. Part 3. Novel 1-aza-allyl- and β-diketiminatothorium chlorides; X-ray structures of $[\{Th(LL')_2(\mu_3\text{-}Cl)(\mu\text{-}Cl)_2K(OEt_2)\}_\infty]$ and $[Th(LL)_2Cl_2]$ [LL' = $N(SiMe_3)C(Bu^t)C(H)SiMe_3$; LL = $\{N(SiMe_3)C(Ph)\}_2CH$] (P.B. Hitchcock, J. Hu, M.F. Lappert and S. Tian), 473
Preparation and thermolysis of complexes derived from some trinuclear ruthenium clusters and 1,4-diphenylbuta-1,3-diyne (M.I. Bruce, N.N. Zaitseva, B.W. Skelton and A.H. White), 93
Preparation of stable α-(nonamethylmetallocenyl)-α-hydroxycarbocations and their transformations (M.I. Rybinskaya, A.Z. Kreindlin, L.N. Kiseleva, N.V. Kruglova, A.A. Kamyshova, P.V. Petrovskii and U. Turpeinen), 257
Reactions of dodecacarbonyltriruthenium with unsaturated α,β-diketones (M.I. Rybinskaya, L.V. Rybin, S.V. Osintseva, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 345
Reactions of pentaphenylantimony with dicarboxylic acids (V.V. Sharutin, O.K. Sharutina, A.P. Pakusina and V.K. Belsky), 87
Reactivity of the electron deficient compound $[(\mu\text{-H})Os_3(CO)_9(\mu_3\text{-}\eta^2\text{-}C_9H_5(CH_3)N)]$ with thiols (S.E. Kabir, H. Vahrenkamp, M.B. Hursthouse and K.M.A. Malik), 509
Ring-methyl activation in pentamethylcyclopentadienyl complexes 7. Reactions of $[Ru(\eta^2\text{:}\eta^5\text{-}C_5Me_4CH_2O(CH_2)_nCH{=}CHR_2)(CO)_2]^+BF_4^-$ with nucleophiles (O.V. Gusev, L.N. Morozova, T.A. Peganova, M.Yu. Antipin, K.A. Lyssenko, A.F. Noels, S.R. O'Leary and P.M. Maitlis), 191
Solid state conformation of the anomeric effect in 2-phosphoryl-, 2-thiophosphoryl- and 2-selenophosphoryl-substituted 1,3-dithiolanes (M. Mikołajczyk, T. Łuczak, P.P. Graczyk, M.W. Wieczorek, J. Błaszczyk, G.D. Bujacz and W.R. Majzner), 355
Sterically encumbered charge-compensated carbaboranes: synthesis and reactivity. Molecular structures of 7-Ph-11-SMe_2-7,8-*nido*-$C_2B_9H_{10}$ and 1-Ph-3,3-$(CO)_2$-7-SMe_2-3,1,2-*closo*-$RhC_2B_9H_8$ (G.M. Rosair, A.J. Welch, A.S. Weller and S.K. Zahn), 299

Structural correlation between Rh–P and Rh–C bond distances vs. ^{31}P and ^{13}C NMR parameters in monocarbonylphosphine-rhodium(I) complexes: crystal structure of (methyl 2-(amino)-1-cyclopentene-1-dithiocarboxylato-$\kappa N,\kappa S$)-carbonyl(triphenylphosphine)rhodium(I) (G.J.J. Steyn, A. Roodt, I. Poletaeva and Y.S. Varshavsky), 197

Structure of a Pt/Re cluster complex: aggregation of ions in crystals of $[Pt_3(Re(CO)_2P(OMe)_3)(\mu_3\text{-}O)_2(\mu\text{-}dppm)_3][AsF_6]$ (K.W. Muir, L. Manojlovic-Muir and A.A. Torabi), 319

Synthesis and structural characterisation of $[Os_4H_2(CO)_{11}\{Au_2(DPPM)\}_2]$: the first cluster with an Os_4Au_4 core (M.R.A. Al-Mandhary, J. Lewis and P.R. Raithby), 549

Synthesis and structure of 3-(cyclohexylamino)propyldimethylsilanol (W. Ziche, B. Herrschaft, F. Hahn, P. John, J. Weis and N. Auner), 375

Synthesis and structure of β-tellurovinylcarbonyl compounds (V.I. Minkin, I.D. Sadekov, B.B. Rivkin, A.V. Zakharov, V.L. Nivorozhkin, O.E. Kompan and Yu.T. Struchkov), 233

Synthesis and structure of the heteronuclear alkyne cluster $RuOs_3(\mu_4\text{-}HC_2Me)(CO)_{12}$ (A.A. Koridze, A.M. Sheloumov, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 381

Synthesis, structure and reactivity of a novel monocarbon hydridorhodacarborane *closo*-2,2-$(Ph_3P)_2$-2-*H*-1-(Me_3N)-2,1-$RhCB_{10}H_{10}$. Molecular structure of 16-electron *closo*-2-(Ph_3P)-2-Cl-1-(Me_3N)-2,1-$RhCB_{10}H_{10}$ and closely related 18-electron *closo*-3,3-$(Ph_3P)_2$-3-Cl-3,1,2-$RhC_2B_9H_{11}$ (I.T. Chizhevsky, I.V. Pisareva, E.V. Vorontzov, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov, C.B. Knobler and M.F. Hawthorne), 223

The interaction of unsaturated C_8-ring systems with ruthenium carbonyl clusters (D.B. Brown, B.F.G. Johnson, C.M. Martin and S. Parsons), 285

Variety of naphthalene coordination modes in the polynuclear (pentamethylcyclopentadienyl)lutetium naphthalene complex $\{[(C_5Me_5\text{-}Lu)_3(C_{10}H_8)(C_{10}H_7)(H)][(Na(THF)_3)]\}_2C_{10}H_8$ (A.V. Protchenko, O.G. Almazova, L.N. Zakharov, G.K. Fukin, Yu.T. Struchkov and M.N. Bochkarev), 457

X-ray study of organic and organoelement compounds of the lanthanides (L.N. Zakharov and Yu.T. Struchkov), 65

Crystal structures

Synthesis of diphosphine-substituted selenido carbonyl iron clusters: progressive deformation of the Fe_3Se_2 core in the *nido* clusters $[Fe_3Se_2(CO)_7\{\mu\text{-}(Ph_2P)_2R\}]$ by widening the bite of the bridging ligand (D. Cauzzi, C. Graiff, M. Lanfranchi, G. Predieri and A. Tiripicchio), 497

Cycloaddition

[4 + 2] Cycloaddition reactions involving 1,3-diphosphacyclopentadiene and 1,2,4-triphosphacyclopentadiene: crystal and molecular structures of the *exo*-compounds $P_3C_3{}^tBu_3H_2$ and $P_4C_6{}^tBu_6H_2$ (V. Caliman, P.B. Hitchcock and J.F. Nixon), 273

Cyclooctatetraene

The interaction of unsaturated C_8-ring systems with ruthenium carbonyl clusters (D.B. Brown, B.F.G. Johnson, C.M. Martin and S. Parsons), 285

Cyclooctene

The interaction of unsaturated C_8-ring systems with ruthenium carbonyl clusters (D.B. Brown, B.F.G. Johnson, C.M. Martin and S. Parsons), 285

Cyclopentadienyl

[4 + 2] Cycloaddition reactions involving 1,3-diphosphacyclopentadiene and 1,2,4-triphosphacyclopentadiene: crystal and molecular structures of the *exo*-compounds $P_3C_3{}^tBu_3H_2$ and $P_4C_6{}^tBu_6H_2$ (V. Caliman, P.B. Hitchcock and J.F. Nixon), 273

Metallation of bicymantrenyl and synthesis of polycymantrenyls (A.G. Ginzburg, S.V. Suprunovich, F.M. Dolgushin, A.I. Yanovsky, E.V. Vorontsov and V.I. Sokolov), 165

Ring-methyl activation in pentamethylcyclopentadienyl complexes 7. Reactions of $[Ru(\eta^2\text{:}\eta^5\text{-}C_5Me_4CH_2O(CH_2)_nCH{=}CHR_2)(CO)_2]^+BF_4^-$ with nucleophiles (O.V. Gusev, L.N. Morozova, T.A. Peganova, M.Yu. Antipin, K.A. Lyssenko, A.F. Noels, S.R. O'Leary and P.M. Maitlis), 191

Synthesis and characterisation of trifluoro(η^5-*n*-propyltetramethylcyclopentadienyl)metal(IV)-compounds of the elements of Group IV (A. Künzel, E. Parisini, H.W. Roesky and G.M. Sheldrick), 177

The electrochemical synthesis of η^5-cyclopentadienylcobalt-η^4-tetraphenylbutadiene and its reaction with iodine in the presence of electron donor ligands (V.A. Knizhnikov, V.L. Shirokii, A.N. Ryabtsev and N.A. Maier), 181

Variety of naphthalene coordination modes in the polynuclear (pentamethylcyclopentadienyl)lutetium naphthalene complex $\{[(C_5Me_5\text{-}Lu)_3(C_{10}H_8)(C_{10}H_7)(H)][(Na(THF)_3)]\}_2C_{10}H_8$ (A.V. Protchenko, O.G. Almazova, L.N. Zakharov, G.K. Fukin, Yu.T. Struchkov and M.N. Bochkarev), 457

Cyclopentadienyl ligands

Polyelement substituted cyclopentadienes and indenes – novel ligand precursors for organotransition metal chemistry (K. Rufanov, E. Avtomonov, N. Kazennova, V. Kotov, A. Khvorost, D. Lemenovskii and J. Lorberth), 361

Cyclopentadienylnickel clusters

The activation of C–H bonds in terminal olefins by cyclopentadienylnickel species (S. Pasynkiewicz, W. Buchowicz, A. Pietrzykowski and T. Głowiak), 249

Decarbonylation

Reactivity of the electron deficient compound $[(\mu\text{-}H)Os_3(CO)_9(\mu_3\text{-}\eta^2\text{-}C_9H_5(CH_3)N)]$ with thiols (S.E. Kabir, H. Vahrenkamp, M.B. Hursthouse and K.M.A. Malik), 509

Diacetylene derivatives

Reactions of diacetylene ligands with trinuclear clusters. II. Reactions of hexa-2,4-diyne-1,6-diol and 1,4-diphenyl-1,3-butadiyne with $Ru_3(CO)_{12}$ (S.P. Tunik, E.V. Grachova, V.R. Denisov, G.L. Starova, A.B. Nikol'skii, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 339

1,4-Diarylbut-2-en-1,4-diones

Reactions of dodecacarbonyltriruthenium with unsaturated α,β-diketones (M.I. Rybinskaya, L.V. Rybin, S.V. Osintseva, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 345

Dicarboxylic acids

Reactions of pentaphenylantimony with dicarboxylic acids (V.V. Sharutin, O.K. Sharutina, A.P. Pakusina and V.K. Belsky), 87

Dications

Polyhalomethanes combined with aluminum halides as generators of superelectrophiles of a novel type (I.S. Akhrem, A.L. Chistyakov, N.P. Gambaryan, I.V. Stankevich and M.E. Vol'pin), 489

β-Diketiminates

Organometallic chemistry of the actinides. Part 3. Novel 1-aza-allyl- and β-diketiminatothorium chlorides; X-ray structures of $[\{Th(LL')_2(\mu_3\text{-}Cl)(\mu\text{-}Cl)_2K(OEt_2)\}_n]$ and $[Th(LL)_2Cl_2]$ [LL' = $N(SiMe_3)C(Bu^t)C(H)SiMe_3$; LL = $\{N(SiMe_3)C(Ph)\}_2CH$] (P.B. Hitchcock, J. Hu, M.F. Lappert and S. Tian), 473

2-(Diphenylphospino)pyrimidine

The new organometallic polydentate ligand *trans*-bis(2-(diphenylphosphino)pyrimidine)tricarbonyliron(0) and its mono-, di- and tridentate coordination modes towards mercury(II) halide/pseudohalide (S.-l. Li, Z.-Z. Zhang and T.C.W. Mak), 73

Disilene
Vibrational spectra of disilenes. Normal coordinate analysis and identification of the ν(Si=Si) stretching vibration (L.A. Leites, S.S. Bukalov, I.A. Garbuzova, R. West, J. Mangette and H. Spitzner), 425

Dithiocarboxylato
Structural correlation between Rh–P and Rh–C bond distances vs. ^{31}P and ^{13}C NMR parameters in monocarbonylphosphinerhodium(I) complexes: crystal structure of (methyl 2-(amino)-1-cyclopentene-1-dithiocarboxylato-$\kappa N,\kappa S$)-carbonyl(triphenylphosphine)rhodium(I) (G.J.J. Steyn, A. Roodt, I. Poletaeva and Y.S. Varshavsky), 197

Diyne
Reactions of the phenyl-substituted five-membered titanacyclocumulene – unusual coupling of a 1,4-disubstituted 1,3-butadiyne with two titanium atoms (V.V. Burlakov, N. Peulecke, W. Baumann, A. Spannenberg, R. Kempe and U. Rosenthal), 293

Diyne complexes
Preparation and thermolysis of complexes derived from some trinuclear ruthenium clusters and 1,4-diphenylbuta-1,3-diyne (M.I. Bruce, N.N. Zaitseva, B.W. Skelton and A.H. White), 93

Dodecacarbonyltriruthenium
Reactions of dodecacarbonyltriruthenium with unsaturated α,β-diketones (M.I. Rybinskaya, L.V. Rybin, S.V. Osintseva, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 345

Donor–acceptor bonding
The new organometallic polydentate ligand *trans*-bis(2-(diphenylphosphino)pyrimidine)tricarbonyliron(0) and its mono-, di- and tridentate coordination modes towards mercury(II) halide/pseudohalide (S.-I. Li, Z.-Z. Zhang and T.C.W. Mak), 73

Doxycycline
Ligand effects in the hydrogenation of methacycline to doxycycline and epi-doxycycline catalysed by rhodium complexes. Molecular structure of the key catalyst [*closo*-3,3-($\eta^{2,3}$-$C_7H_7CH_2$)-3,1,2-$RhC_2B_9H_{11}$] (A. Felekidis, M. Goblet-Stachow, J.F. Liégeois, B. Pirotte, J. Delarge, A. Demonceau, M. Fontaine, A.F. Noels, I.T. Chizhevsky, T.V. Zinevich, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 405

Early transition metals
Reactions of the phenyl-substituted five-membered titanacyclocumulene – unusual coupling of a 1,4-disubstituted 1,3-butadiyne with two titanium atoms (V.V. Burlakov, N. Peulecke, W. Baumann, A. Spannenberg, R. Kempe and U. Rosenthal), 293
Synthesis and characterisation of trifluoro(η^5-*n*-propyltetramethylcyclopentadienyl)metal(IV)-compounds of the elements of Group IV (A. Künzel, E. Parisini, H.W. Roesky and G.M. Sheldrick), 177

Electrochemistry
Template synthesis, structure and electrochemistry of trinuclear iron(II) clathrochelate dioximates with ferrocenylboron fragments (Y.Z. Voloshin, T.E. Kron, V.K. Belsky, V.E. Zavodnik, Yu.A. Maletin and S.G. Kozachkov), 207
The electrochemical synthesis of η^5-cyclopentadienylcobalt-η^4-tetraphenylbutadiene and its reaction with iodine in the presence of electron donor ligands (V.A. Knizhnikov, V.L. Shirokii, A.N. Ryabtsev and N.A. Maier), 181
The role of Ni(0) complexes in electrochemical phosphorylation of organic halides. Part 1. Factors determining catalytic activity (Y.H. Budnikova and Yu.M. Kargin), 265

Electron deficient
Reactivity of the electron deficient compound [(μ-H)$Os_3(CO)_9$(μ_3-η^2-$C_9H_5(CH_3)N$)] with thiols (S.E. Kabir, H. Vahrenkamp, M.B. Hursthouse and K.M.A. Malik), 509

Electron deformation density
Chelating organophosphines: the use of comparative structural investigations to determine ligand properties (J. Bruckmann and C. Krüger), 465

Electron diffraction
The molecular structure of a germacyclobutane by gas electron diffraction and ab initio molecular orbital calculations (A. Haaland, S. Samdal, T.G. Strand, M.A. Tafipolsky, H.V. Volden, B.J.J. Van de Heisteeg, O.S. Akkerman and F. Bickelhaupt), 217

Erbium
Organometallic compounds of the lanthanides. CXV. Donor substituted chiral *ansa*-lanthanidocenes: synthesis of dimethyl(dimethylaminoethylcyclopentadienyl)(tetramethylcyclopentadienyl)-silane dipotassium and of some chiral *ansa*-metallocene derivatives of Y, Sm, Ho, Er and Lu [2] (H. Schumann, F. Erbstein, R. Weimann and J. Demtschuk), 541

Exchange equilibria
The influence of aryl ligands on the chemical hardness of triarylitin cations (D.N. Kravtsov, A.S. Peregudov, V.M. Pachevskaya and L.S. Golovchenko), 385

Ferrocenyl derivatives
Template synthesis, structure and electrochemistry of trinuclear iron(II) clathrochelate dioximates with ferrocenylboron fragments (Y.Z. Voloshin, T.E. Kron, V.K. Belsky, V.E. Zavodnik, Yu.A. Maletin and S.G. Kozachkov), 207

Fluorine
Synthesis and characterisation of trifluoro(η^5-*n*-propyltetramethylcyclopentadienyl)metal(IV)-compounds of the elements of Group IV (A. Künzel, E. Parisini, H.W. Roesky and G.M. Sheldrick), 177

Formylnonamethylmetallocene
Preparation of stable α-(nonamethylmetallocenyl)-α-hydroxycarbocations and their transformations (M.I. Rybinskaya, A.Z. Kreindlin, L.N. Kiseleva, N.V. Kruglova, A.A. Kamyshova, P.V. Petrovskii and U. Turpeinen), 257

Gas-phase electron diffraction
Molecular structure and conformation of trimethylsilylbenzene: a study by gas-phase electron diffraction and theoretical calculations (A.R. Campanelli, F. Ramondo, A. Domenicano and I. Hargittai), 309

Generalized chemical bonds
Crown compounds for anions. A new approach to the description of chemical bonds in the complexes of halide anions with polymercury-containing macrocycles [1] (A.L. Chistyakov, I.V. Stankevich, N.P. Gambaryan, Yu.T. Struchkov, A.I. Yanovsky, I.A. Tikhonova and V.B. Shur), 413

Germacyclobutane
The molecular structure of a germacyclobutane by gas electron diffraction and ab initio molecular orbital calculations (A. Haaland, S. Samdal, T.G. Strand, M.A. Tafipolsky, H.V. Volden, B.J.J. Van de Heisteeg, O.S. Akkerman and F. Bickelhaupt), 217

Germanium
The molecular structure of a germacyclobutane by gas electron diffraction and ab initio molecular orbital calculations (A. Haaland, S. Samdal, T.G. Strand, M.A. Tafipolsky, H.V. Volden, B.J.J. Van de Heisteeg, O.S. Akkerman and F. Bickelhaupt), 217
X-ray study of organic and organoelement compounds of the lanthanides (L.N. Zakharov and Yu.T. Struchkov), 65

Gold
Synthesis and structural characterisation of [$Os_4H_2(CO)_{11}$-{Au_2(DPPM)}$_2$]: the first cluster with an Os_4Au_4 core (M.R.A. Al-Mandhary, J. Lewis and P.R. Raithby), 549

Group 4
Reactions of the phenyl-substituted five-membered titanacyclocumulene – unusual coupling of a 1,4-disubstituted 1,3-butadiyne with

two titanium atoms (V.V. Burlakov, N. Peulecke, W. Baumann, A. Spannenberg, R. Kempe and U. Rosenthal), 293
Synthesis and characterisation of trifluoro(η^5-*n*-propyltetramethylcyclopentadienyl)metal(IV)-compounds of the elements of Group IV (A. Künzel, E. Parisini, H.W. Roesky and G.M. Sheldrick), 177

Group 8
Organotransition-metal metallacarboranes. 45. Synthesis and structure of hydridoruthenacarborane double-decker and triple-decker sandwich complexes (E.J. Houser, M.A. Curtis, M. Sabat and R.N. Grimes), 115

Group VIII
Synthesis and characterization of the first charge-compensated monocarbollide(octacarbonyl)triosmium complex (V.N. Lebedev, D.F. Mullica, E.L. Sappenfield and F.G.A. Stone), 537

Group 15
[4 + 2] Cycloaddition reactions involving 1,3-diphosphacyclopentadiene and 1,2,4-triphosphacyclopentadiene: crystal and molecular structures of the *exo*-compounds $P_3C_5{}^tBu_5H_2$ and $P_4C_6{}^tBu_6H_2$ (V. Caliman, P.B. Hitchcock and J.F. Nixon), 273

Halide
Synthesis and characterisation of trifluoro(η^5-*n*-propyltetramethylcyclopentadienyl)metal(IV)-compounds of the elements of Group IV (A. Künzel, E. Parisini, H.W. Roesky and G.M. Sheldrick), 177

Halide anions
Crown compounds for anions. A new approach to the description of chemical bonds in the complexes of halide anions with polymercury-containing macrocycles [1] (A.L. Chistyakov, I.V. Stankevich, N.P. Gambaryan, Yu.T. Struchkov, A.I. Yanovsky, I.A. Tikhonova and V.B. Shur), 413

Halogen
Dihydrogen addition to $(P^iPr_3)_2OsX_nH_{4-n}$ (R. Kuhlman, D.G. Gusev, I.L. Eremenko, H. Berke, J.C. Huffman and K.G. Caulton), 139

Heterobimetallic complex
The new organometallic polydentate ligand *trans*-bis(2-(diphenylphosphino)pyrimidine)tricarbonyliron(0) and its mono-, di- and tridentate coordination modes towards mercury(II) halide/pseudohalide (S.-l. Li, Z.-Z. Zhang and T.C.W. Mak), 73

η^6-, μ-η^6/η^6-, η^4-, η^2-, μ-σ,σ-complexation
Novel generation of organometallic systems. Metal carbonyl complexes with silacarbacyclic π-ligands, synthetic and structural investigations (O.B. Afanasova, N.I. Kirillova, E.A. Chernyshev and Yu.T. Struchkov), 31

Holmium
Organometallic compounds of the lanthanides. CXV. Donor substituted chiral *ansa*-lanthanidocenes: synthesis of dimethyl(dimethylaminoethylcyclopentadienyl)(tetramethylcyclopentadienyl)-silane dipotassium and of some chiral *ansa*-metallocene derivatives of Y, Sm, Ho, Er and Lu [2] (H. Schumann, F. Erbstein, R. Weimann and J. Demtschuk), 541

Homogeneous redox catalysis
The role of Ni(0) complexes in electrochemical phosphorylation of organic halides. Part 1. Factors determining catalytic activity (Y.H. Budnikova and Yu.M. Kargin), 265

Hydride
Reactivity of the electron deficient compound $[(\mu\text{-H})Os_3(CO)_9\{\mu_3\text{-}\eta^2\text{-}C_9H_5(CH_3)N\}]$ with thiols (S.E. Kabir, H. Vahrenkamp, M.B. Hursthouse and K.M.A. Malik), 509

Hydride addition
Dihydrogen addition to $(P^iPr_3)_2OsX_nH_{4-n}$ (R. Kuhlman, D.G. Gusev, I.L. Eremenko, H. Berke, J.C. Huffman and K.G. Caulton), 139

Hydroboration
Directive effects in the hydroboration of 1-alkenyl derivatives of *o*-carborane with representative hydroborating agents (G.W. Kabalka and G. Hondrogiannis), 327

Hydrogen
Behaviour of triphenylphosphine-substituted ruthenium carbonyl carboxylates with hydrogen (P. Frediani, C. Faggi, S. Papaleo, A. Salvini, M. Bianchi, F. Piacenti, S. Ianelli and M. Nardelli), 123
Dihydrogen addition to $(P^iPr_3)_2OsX_nH_{4-n}$ (R. Kuhlman, D.G. Gusev, I.L. Eremenko, H. Berke, J.C. Huffman and K.G. Caulton), 139

Hydrogenation
Ligand effects in the hydrogenation of methacycline to doxycycline and epi-doxycycline catalysed by rhodium complexes. Molecular structure of the key catalyst [*closo*-3,3-($\eta^{2,3}$-$C_7H_7CH_2$)-3,1,2-$RhC_2B_9H_{11}$] (A. Felekidis, M. Goblet-Stachow, J.F. Liégeois, B. Pirotte, J. Delarge, A. Demonceau, M. Fontaine, A.F. Noels, I.T. Chizhevsky, T.V. Zinevich, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 405

Hydrogen bond
Novel types of hydrogen bonding with transition metal π-complexes and hydrides (E.S. Shubina, N.V. Belkova and L.M. Epstein), 17
Synthesis and structure of 3-(cyclohexylamino)propyldimethylsilanol (W. Ziche, B. Herrschaft, F. Hahn, P. John, J. Weis and N. Auner), 375

Hydrogen bonding
Structure of a Pt/Re cluster complex: aggregation of ions in crystals of $[Pt_3(Re(CO)_2P(OMe)_3)(\mu_3\text{-}O)_2(\mu\text{-dppm})_3][AsF_6]$ (K.W. Muir, L. Manojlovic-Muir and A.A. Torabi), 319

Hydrogen bonds
Preparation of stable α-(nonamethylmetallocenyl)-α-hydroxycarbocations and their transformations (M.I. Rybinskaya, A.Z. Kreindlin, L.N. Kiseleva, N.V. Kruglova, A.A. Kamyshova, P.V. Petrovskii and U. Turpeinen), 257

Indenyl ligands
Polyelement substituted cyclopentadienes and indenes – novel ligand precursors for organotransition metal chemistry (K. Rufanov, E. Avtomonov, N. Kazennova, V. Kotov, A. Khvorost, D. Lemenovskii and J. Lorberth), 361

Indium
Vibrational spectra and structure of trimethylindium and trimethylthallium (A.P. Kurbakova, S.S. Bukalov, L.A. Leites, L.M. Golubinskaya and V.I. Bregadze), 519

Intramolecular coordination
Synthesis and crystal structure of enantiomeric *N*-(dimethylfluorosilylmethyl) and *N*-(dimethylchlorosilylmethyl)-[*N*-(*S*)-1-phenylethyl)] acetamides (Yu.I. Baukov, Yu.E. Ovchinnikov, A.G. Shipov, E.P. Kramarova, V.V. Negrebetsky and Yu.T. Struchkov), 399

Iridium
X-ray structures of decamethylplatinocene dication in the crystal of $[Pt(\eta^5\text{-}C_5Me_5)_2]^{2+}(PF_6^-)_2$ and decamethyliridocenium cation in the crystal of $[Ir(\eta^5\text{-}C_5Me_5)_2]^+(BPh_4^-)\cdot CH_2Cl_2$ (Yu.T. Struchkov, M.Yu. Antipin, K.A. Lyssenko, O.V. Gusev, T.A. Peganova and N.A. Ustynyuk), 281

Iron
Preparation of stable α-(nonamethylmetallocenyl)-α-hydroxycarbocations and their transformations (M.I. Rybinskaya, A.Z. Kreindlin, L.N. Kiseleva, N.V. Kruglova, A.A. Kamyshova, P.V. Petrovskii and U. Turpeinen), 257
Synthesis of diphosphine-substituted selenido carbonyl iron clusters: progressive deformation of the Fe_3Se_2 core in the *nido* clusters $[Fe_3Se_2(CO)_7\{\mu\text{-}(Ph_2P)_2R\}]$ by widening the bite of the bridging ligand (D. Cauzzi, C. Graiff, M. Lanfranchi, G. Predieri and A. Tiripicchio), 497

The new organometallic polydentate ligand *trans*-bis(2-(diphenylphosphino)pyrimidine)tricarbonyliron(0) and its mono-, di- and tridentate coordination modes towards mercury(II) halide/pseudohalide (S.-l. Li, Z.-Z. Zhang and T.C.W. Mak), 73

Lanthanides
X-ray study of organic and organoelement compounds of the lanthanides (L.N. Zakharov and Yu.T. Struchkov), 65

ansa-Lanthanidocene complexes
Organometallic compounds of the lanthanides. CXV. Donor substituted chiral *ansa*-lanthanidocenes: synthesis of dimethyl(dimethylaminoethylcyclopentadienyl)(tetramethylcyclopentadienyl)-silane dipotassium and of some chiral *ansa*-metallocene derivatives of Y, Sm, Ho, Er and Lu [2] (H. Schumann, F. Erbstein, R. Weimann and J. Demtschuk), 541

Lanthanoid
Variety of naphthalene coordination modes in the polynuclear (pentamethylcyclopentadienyl)lutetium naphthalene complex $\{[(C_5Me_5\text{-}Lu)_3(C_{10}H_8)(C_{10}H_7)(H)][(Na(THF)_3)]_2C_{10}H_8$ (A.V. Protchenko, O.G. Almazova, L.N. Zakharov, G.K. Fukin, Yu.T. Struchkov and M.N. Bochkarev), 457

Lithium
The *tert*-butyl chloride–lithium naphthalene radical anion and *tert*-butyllithium–naphthalene systems. Mechanism of metallation (C.G. Screttas, M. Micha-Screttas and B.R. Steele), 149

Lutetium
Organometallic compounds of the lanthanides. CXV. Donor substituted chiral *ansa*-lanthanidocenes: synthesis of dimethyl(dimethylaminoethylcyclopentadienyl)(tetramethylcyclopentadienyl)-silane dipotassium and of some chiral *ansa*-metallocene derivatives of Y, Sm, Ho, Er and Lu [2] (H. Schumann, F. Erbstein, R. Weimann and J. Demtschuk), 541

Variety of naphthalene coordination modes in the polynuclear (pentamethylcyclopentadienyl)lutetium naphthalene complex $\{[(C_5Me_5\text{-}Lu)_3(C_{10}H_8)(C_{10}H_7)(H)][(Na(THF)_3)]_2C_{10}H_8$ (A.V. Protchenko, O.G. Almazova, L.N. Zakharov, G.K. Fukin, Yu.T. Struchkov and M.N. Bochkarev), 457

Manganese
Metallation of bicymantrenyl and synthesis of polycymantrenyls (A.G. Ginzburg, S.V. Suprunovich, F.M. Dolgushin, A.I. Yanovsky, E.V. Vorontsov and V.I. Sokolov), 165

Mechanism
The *tert*-butyl chloride–lithium naphthalene radical anion and *tert*-butyllithium–naphthalene systems. Mechanism of metallation (C.G. Screttas, M. Micha-Screttas and B.R. Steele), 149

Mercury(II) complex
The new organometallic polydentate ligand *trans*-bis(2-(diphenylphosphino)pyrimidine)tricarbonyliron(0) and its mono-, di- and tridentate coordination modes towards mercury(II) halide/pseudohalide (S.-l. Li, Z.-Z. Zhang and T.C.W. Mak), 73

Metallacarboranes
Semi-sandwich platinum metals metallacarboranes derived from *nido*-$C_2B_9H_{12}^-$: chemistry and structural studies (I.T. Chizhevsky, A.I. Yanovsky and Yu.T. Struchkov), 51

Metallacycle
Reactions of the phenyl-substituted five-membered titanacyclocumulene – unusual coupling of a 1,4-disubstituted 1,3-butadiyne with two titanium atoms (V.V. Burlakov, N. Peulecke, W. Baumann, A. Spannenberg, R. Kempe and U. Rosenthal), 293

Metallation
Benzylic functionalization of (η^6-alkylarene)chromium tricarbonyl complexes (V.N. Kalinin, I.A. Cherepanov and S.K. Moiseev), 437

Metallocenes
Novel Group 4b *ansa*-metallocene complexes with the shortest bridge: [1,1'-isopropylydene-3,3'-di-t.Bu-bis(η^5-cyclopentadienyl)] Ti and Zr dichlorides (I.F. Urazowski, L.O. Atovmyan, S.G. Mkoyan, R. Broussier, P. Perron, B. Gautheron and F. Robert), 531

Polyelement substituted cyclopentadienes and indenes – novel ligand precursors for organotransition metal chemistry (K. Rufanov, E. Avtomonov, N. Kazennova, V. Kotov, A. Khvorost, D. Lemenovskii and J. Lorberth), 361

Reactions of the phenyl-substituted five-membered titanacyclocumulene – unusual coupling of a 1,4-disubstituted 1,3-butadiyne with two titanium atoms (V.V. Burlakov, N. Peulecke, W. Baumann, A. Spannenberg, R. Kempe and U. Rosenthal), 293

X-ray structures of decamethylplatinocene dication in the crystal of $[Pt(\eta^5\text{-}C_5Me_5)_2]^{2+}(PF_6^-)_2$ and decamethyliridocenium cation in the crystal of $[Ir(\eta^5\text{-}C_5Me_5)_2]^+(BPh_4^-)\cdot CH_2Cl_2$ (Yu.T. Struchkov, M.Yu. Antipin, K.A. Lyssenko, O.V. Gusev, T.A. Peganova and N.A. Ustynyuk), 281

ansa-Metallocenes
Novel Group 4b *ansa*-metallocene complexes with the shortest bridge: [1,1'-isopropylydene-3,3'-di-t.Bu-bis(η^5-cyclopentadienyl)] Ti and Zr dichlorides (I.F. Urazowski, L.O. Atovmyan, S.G. Mkoyan, R. Broussier, P. Perron, B. Gautheron and F. Robert), 531

Methacycline
Ligand effects in the hydrogenation of methacycline to doxycycline and epi-doxycycline catalysed by rhodium complexes. Molecular structure of the key catalyst [*closo*-3,3-($\eta^{2,3}$-$C_7H_7CH_2$)-3,1,2-$RhC_2B_9H_{11}$] (A. Felekidis, M. Goblet-Stachow, J.F. Liégeois, B. Pirotte, J. Delarge, A. Demonceau, M. Fontaine, A.F. Noels, I.T. Chizhevsky, T.V. Zinevich, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 405

Methyl group rotation
Vibrational spectra and structure of trimethylindium and trimethylthallium (A.P. Kurbakova, S.S. Bukalov, L.A. Leites, L.M. Golubinskaya and V.I. Bregadze), 519

MNDO method
Crown compounds for anions. A new approach to the description of chemical bonds in the complexes of halide anions with polymercury-containing macrocycles [1] (A.L. Chistyakov, I.V. Stankevich, N.P. Gambaryan, Yu.T. Struchkov, A.I. Yanovsky, I.A. Tikhonova and V.B. Shur), 413

MO calculations
The molecular structure of a germacyclobutane by gas electron diffraction and ab initio molecular orbital calculations (A. Haaland, S. Samdal, T.G. Strand, M.A. Tafipolsky, H.V. Volden, B.J.J. Van de Heisteeg, O.S. Akkerman and F. Bickelhaupt), 217

Molecular mechanics
Molecular structure and conformation of trimethylsilylbenzene: a study by gas-phase electron diffraction and theoretical calculations (A.R. Campanelli, F. Ramondo, A. Domenicano and I. Hargittai), 309

The MM3 force field for 12-vertex boranes and carboranes (T.V. Timofeeva, K.Yu. Suponitsky, A.I. Yanovsky and N.L. Allinger), 481

Molecular structure
Molecular structure and conformation of trimethylsilylbenzene: a study by gas-phase electron diffraction and theoretical calculations (A.R. Campanelli, F. Ramondo, A. Domenicano and I. Hargittai), 309

Multipole expansion
Chelating organophosphines: the use of comparative structural investigations to determine ligand properties (J. Bruckmann and C. Krüger), 465

Naphthalene
The *tert*-butyl chloride–lithium naphthalene radical anion and *tert*-butyllithium–naphthalene systems. Mechanism of metallation (C.G. Screttas, M. Micha-Screttas and B.R. Steele), 149
Variety of naphthalene coordination modes in the polynuclear (pentamethylcyclopentadienyl)lutetium naphthalene complex $[[(C_5Me_5Lu)_3(C_{10}H_8)(C_{10}H_7)(H)][(Na(THF)_3)]_2C_{10}H_8$ (A.V. Protchenko, O.G. Almazova, L.N. Zakharov, G.K. Fukin, Yu.T. Struchkov and M.N. Bochkarev), 457
Nickel
The activation of C–H bonds in terminal olefins by cyclopentadienylnickel species (S. Pasynkiewicz, W. Buchowicz, A. Pietrzykowski and T. Głowiak), 249
Ni(0) complexes
The role of Ni(0) complexes in electrochemical phosphorylation of organic halides. Part 1. Factors determining catalytic activity (Y.H. Budnikova and Yu.M. Kargin), 265
NMR
Structural correlation between Rh–P and Rh–C bond distances vs. ^{31}P and ^{13}C NMR parameters in monocarbonylphosphinerhodium(I) complexes: crystal structure of (methyl 2-(amino)-1-cyclopentene-1-dithiocarboxylato-$\kappa N,\kappa S$)-carbonyl(triphenylphosphine)rhodium(I) (G.J.J. Steyn, A. Roodt, I. Poletaeva and Y.S. Varshavsky), 197
C-Norbenzomorphans
Benzylic functionalization of (η^6-alkylarene)chromium tricarbonyl complexes (V.N. Kalinin, I.A. Cherepanov and S.K. Moiseev), 437
Normal coordinate analysis
Vibrational spectra of disilenes. Normal coordinate analysis and identification of the ν(Si=Si) stretching vibration (L.A. Leites, S.S. Bukalov, I.A. Garbuzova, R. West, J. Mangette and H. Spitzner), 425
Nucleophilic attack
Ring-methyl activation in pentamethylcyclopentadienyl complexes 7. Reactions of $[Ru(\eta^2:\eta^5\text{-}C_5Me_4CH_2O(CH_2)_nCH{=}CHR_2)(CO)_2]^+BF_4^-$ with nucleophiles (O.V. Gusev, L.N. Morozova, T.A. Peganova, M.Yu. Antipin, K.A. Lyssenko, A.F. Noels, S.R. O'Leary and P.M. Maitlis), 191

Olefin chelate
Ring-methyl activation in pentamethylcyclopentadienyl complexes 7. Reactions of $[Ru(\eta^2:\eta^5\text{-}C_5Me_4CH_2O(CH_2)_nCH{=}CHR_2)(CO)_2]^+BF_4^-$ with nucleophiles (O.V. Gusev, L.N. Morozova, T.A. Peganova, M.Yu. Antipin, K.A. Lyssenko, A.F. Noels, S.R. O'Leary and P.M. Maitlis), 191
O-protonation
Preparation of stable α-(nonamethylmetallocenyl)-α-hydroxycarbocations and their transformations (M.I. Rybinskaya, A.Z. Kreindlin, L.N. Kiseleva, N.V. Kruglova, A.A. Kamyshova, P.V. Petrovskii and U. Turpeinen), 257
Optically active compounds
Synthesis and crystal structure of enantiomeric *N*-(dimethylfluorosilylmethyl) and *N*-(dimethylchlorosilylmethyl)-[*N*-(*S*)-1-phenylethyl)] acetamides (Yu.I. Baukov, Yu.E. Ovchinnikov, A.G. Shipov, E.P. Kramarova, V.V. Negrebetsky and Yu.T. Struchkov), 399
Organoiron complex
The new organometallic polydentate ligand *trans*-bis(2-(diphenylphosphino)pyrimidine)tricarbonyliron(0) and its mono-, di- and tridentate coordination modes towards mercury(II) halide/pseudohalide (S.-I. Li, Z.-Z. Zhang and T.C.W. Mak), 73
Osmium
Dihydrogen addition to $(P^iPr_3)_2OsX_nH_{4-n}$ (R. Kuhlman, D.G. Gusev, I.L. Eremenko, H. Berke, J.C. Huffman and K.G. Caulton), 139
Preparation of stable α-(nonamethylmetallocenyl)-α-hydroxycarbocations and their transformations (M.I. Rybinskaya, A.Z. Kreindlin, L.N. Kiseleva, N.V. Kruglova, A.A. Kamyshova, P.V. Petrovskii and U. Turpeinen), 257
Reactivity of the electron deficient compound $[(\mu\text{-}H)Os_3(CO)_9(\mu_3\text{-}\eta^2\text{-}C_9H_5(CH_3)N]$ with thiols (S.E. Kabir, H. Vahrenkamp, M.B. Hursthouse and K.M.A. Malik), 509
Synthesis and characterization of the first charge-compensated monocarbollide(octacarbonyl)triosmium complex (V.N. Lebedev, D.F. Mullica, E.L. Sappenfield and F.G.A. Stone), 537
Synthesis and structural characterisation of $[Os_4H_2(CO)_{11}\{Au_2(DPPM)\}_2]$: the first cluster with an Os_4Au_4 core (M.R.A. Al-Mandhary, J. Lewis and P.R. Raithby), 549
Synthesis and structure of the heteronuclear alkyne cluster $RuOs_3(\mu_4\text{-}HC_2Me)(CO)_{12}$ (A.A. Koridze, A.M. Sheloumov, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 381
Oxaruthenacycles
Reactions of dodecacarbonyltriruthenium with unsaturated α,β-diketones (M.I. Rybinskaya, L.V. Rybin, S.V. Osintseva, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 345

Pentacoordinated organosilicon compounds
Synthesis and crystal structure of enantiomeric *N*-(dimethylfluorosilylmethyl) and *N*-(dimethylchlorosilylmethyl)-[*N*-(*S*)-1-phenylethyl)] acetamides (Yu.I. Baukov, Yu.E. Ovchinnikov, A.G. Shipov, E.P. Kramarova, V.V. Negrebetsky and Yu.T. Struchkov), 399
Permethylcyclopentadienyl
Ring-methyl activation in pentamethylcyclopentadienyl complexes 7. Reactions of $[Ru(\eta^2:\eta^5\text{-}C_5Me_4CH_2O(CH_2)_nCH{=}CHR_2)(CO)_2]^+BF_4^-$ with nucleophiles (O.V. Gusev, L.N. Morozova, T.A. Peganova, M.Yu. Antipin, K.A. Lyssenko, A.F. Noels, S.R. O'Leary and P.M. Maitlis), 191
Phosphanes
Solid state conformation of the anomeric effect in 2-phosphoryl-, 2-thiophosphoryl- and 2-selenophosphoryl-substituted 1,3-dithiolanes (M. Mikołajczyk, T. Łuczak, P.P. Graczyk, M.W. Wieczorek, J. Błaszczyk, G.D. Bujacz and W.R. Majzner), 355
Phosphine
Synthesis and structural characterisation of $[Os_4H_2(CO)_{11}\{Au_2(DPPM)\}_2]$: the first cluster with an Os_4Au_4 core (M.R.A. Al-Mandhary, J. Lewis and P.R. Raithby), 549
Phosphorus
[4 + 2] Cycloaddition reactions involving 1,3-diphosphacyclopentadiene and 1,2,4-triphosphacyclopentadiene: crystal and molecular structures of the *exo*-compounds $P_3C_3{}^tBu_3H_2$ and $P_4C_2{}^tBu_2H_2$ (V. Caliman, P.B. Hitchcock and J.F. Nixon), 273
Chelating organophosphines: the use of comparative structural investigations to determine ligand properties (J. Bruckmann and C. Krüger), 465
Phosphorus chlorides
The role of Ni(0) complexes in electrochemical phosphorylation of organic halides. Part 1. Factors determining catalytic activity (Y.H. Budnikova and Yu.M. Kargin), 265
Phosphoryldithiolanes
Solid state conformation of the anomeric effect in 2-phosphoryl-, 2-thiophosphoryl- and 2-selenophosphoryl-substituted 1,3-dithiolanes (M. Mikołajczyk, T. Łuczak, P.P. Graczyk, M.W. Wieczorek, J. Błaszczyk, G.D. Bujacz and W.R. Majzner), 355
Photoisomerization
Crystalline-state β–α photoisomerization of cobaloxime complexes, part 1. Generation of asymmetry in chiral crystal environment (A. Sekine, H. Tatsuki and Y. Ohashi), 389

Platinum
Antiferromagnetic complexes with the metal–metal bond. XXVIII. Synthesis and molecular structure of the antiferromagnetic cluster $[CpCr(\mu\text{-}SCMe_3)]_2(\mu_4\text{-}S)[PtMe_3(\mu\text{-}I)]_2$ (A.A. Pasynskii, Y.V. Torubaev, S.E. Nefedov, I.L. Eremenko, O.G. Ellert, V.K. Belsky and A.I. Stastch), 433
Structure of a Pt/Re cluster complex: aggregation of ions in crystals of $[Pt_3\{Re(CO)_2P(OMe)_3\}(\mu_3\text{-}O)_2(\mu\text{-dppm})_3][AsF_6]$ (K.W. Muir, L. Manojlovic-Muir and A.A. Torabi), 319
X-ray structures of decamethylplatinocene dication in the crystal of $[Pt(\eta^5\text{-}C_5Me_5)_2]^{2+}(PF_6^-)_2$ and decamethyliridocenium cation in the crystal of $[Ir(\eta^5\text{-}C_5Me_5)_2]^+(BPh_4^-)\cdot CH_2Cl_2$ (Yu.T. Struchkov, M.Yu. Antipin, K.A. Lyssenko, O.V. Gusev, T.A. Peganova and N.A. Ustynyuk), 281
Platinum metals
Semi-sandwich platinum metals metallacarboranes derived from *nido*-$C_2B_9H_{12}^-$: chemistry and structural studies (I.T. Chizhevsky, A.I. Yanovsky and Yu.T. Struchkov), 51
Polyhalomethanes
Polyhalomethanes combined with aluminum halides as generators of superelectrophiles of a novel type (I.S. Akhrem, A.L. Chistyakov, N.P. Gambaryan, I.V. Stankevich and M.E. Vol'pin), 489
Polymercury-containing macrocycles
Crown compounds for anions. A new approach to the description of chemical bonds in the complexes of halide anions with polymercury-containing macrocycles [1] (A.L. Chistyakov, I.V. Stankevich, N.P. Gambaryan, Yu.T. Struchkov, A.I. Yanovsky, I.A. Tikhonova and V.B. Shur), 413
Proton transfer
Novel types of hydrogen bonding with transition metal π-complexes and hydrides (E.S. Shubina, N.V. Belkova and L.M. Epstein), 17

Quantum-chemical calculations
Polyhalomethanes combined with aluminum halides as generators of superelectrophiles of a novel type (I.S. Akhrem, A.L. Chistyakov, N.P. Gambaryan, I.V. Stankevich and M.E. Vol'pin), 489

Radical anions
The *tert*-butyl chloride–lithium naphthalene radical anion and *tert*-butyllithium–naphthalene systems. Mechanism of metallation (C.G. Screttas, M. Micha-Screttas and B.R. Steele), 149
Raman and IR spectra
Vibrational spectra of disilenes. Normal coordinate analysis and identification of the $\nu(Si{=}Si)$ stretching vibration (L.A. Leites, S.S. Bukalov, I.A. Garbuzova, R. West, J. Mangette and H. Spitzner), 425
Raman and IR spectroscopy
Vibrational spectra and structure of trimethylindium and trimethylthallium (A.P. Kurbakova, S.S. Bukalov, L.A. Leites, L.M. Golubinskaya and V.I. Bregadze), 519
Reactivity
Reactivity of the electron deficient compound $[(\mu\text{-}H)Os_3(CO)_9\{\mu_3\text{-}\eta^2\text{-}C_9H_5(CH_3)N\}]$ with thiols (S.E. Kabir, H. Vahrenkamp, M.B. Hursthouse and K.M.A. Malik), 509
Rhenium
Structure of a Pt/Re cluster complex: aggregation of ions in crystals of $[Pt_3\{Re(CO)_2P(OMe)_3\}(\mu_3\text{-}O)_2(\mu\text{-dppm})_3][AsF_6]$ (K.W. Muir, L. Manojlovic-Muir and A.A. Torabi), 319
Rhodacarboranes
Ligand effects in the hydrogenation of methacycline to doxycycline and epi-doxycycline catalysed by rhodium complexes. Molecular structure of the key catalyst [*closo*-3,3-$(\eta^{2,3}\text{-}C_7H_7CH_2)$-3,1,2-$RhC_2B_9H_{11}$] (A. Felekidis, M. Goblet-Stachow, J.F. Liégeois, B. Pirotte, J. Delarge, A. Demonceau, M. Fontaine, A.F. Noels, I.T. Chizhevsky, T.V. Zinevich, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 405
Rhodium
Ligand effects in the hydrogenation of methacycline to doxycycline and epi-doxycycline catalysed by rhodium complexes. Molecular structure of the key catalyst [*closo*-3,3-$(\eta^{2,3}\text{-}C_7H_7CH_2)$-3,1,2-$RhC_2B_9H_{11}$] (A. Felekidis, M. Goblet-Stachow, J.F. Liégeois, B. Pirotte, J. Delarge, A. Demonceau, M. Fontaine, A.F. Noels, I.T. Chizhevsky, T.V. Zinevich, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 405
Sterically encumbered charge-compensated carbaboranes: synthesis and reactivity. Molecular structures of 7-Ph-11-SMe_2-7,8-*nido*-$C_2B_9H_{10}$ and 1-Ph-3,3-$(CO)_2$-7-SMe_2-3,1,2-*closo*-$RhC_2B_9H_8$ (G.M. Rosair, A.J. Welch, A.S. Weller and S.K. Zahn), 299
Structural correlation between Rh–P and Rh–C bond distances vs. ^{31}P and ^{13}C NMR parameters in monocarbonylphosphinerhodium(I) complexes: crystal structure of (methyl 2-(amino)-1-cyclopentene-1-dithiocarboxylato-$\kappa N,\kappa S$)-carbonyl(triphenylphosphine)rhodium(I) (G.J.J. Steyn, A. Roodt, I. Poletaeva and Y.S. Varshavsky), 197
Synthesis, structure and reactivity of a novel monocarbon hydridorhodacarborane *closo*-2,2-$(Ph_3P)_2$-2-*H*-1-(Me_3N)-2,1-$RhCB_{10}H_{10}$. Molecular structure of 16-electron *closo*-2-(Ph_3P)-2-Cl-1-(Me_3N)-2,1-$RhCB_{10}H_{10}$ and closely related 18-electron *closo*-3,3-$(Ph_3P)_2$-3-Cl-3,1,2-$RhC_2B_9H_{11}$ (I.T. Chizhevsky, I.V. Pisareva, E.V. Vorontzov, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov, C.B. Knobler and M.F. Hawthorne), 223
Ruthenium
Behaviour of triphenylphosphine-substituted ruthenium carbonyl carboxylates with hydrogen (P. Frediani, C. Faggi, S. Papaleo, A. Salvini, M. Bianchi, F. Piacenti, S. Ianelli and M. Nardelli), 123
Organotransition-metal metallacarboranes. 45. Synthesis and structure of hydridoruthenacarborane double-decker and triple-decker sandwich complexes (E.J. Houser, M.A. Curtis, M. Sabat and R.N. Grimes), 115
Preparation and thermolysis of complexes derived from some trinuclear ruthenium clusters and 1,4-diphenylbuta-1,3-diyne (M.I. Bruce, N.N. Zaitseva, B.W. Skelton and A.H. White), 93
Preparation of stable α-(nonamethylmetallocenyl)-α-hydroxycarbocations and their transformations (M.I. Rybinskaya, A.Z. Kreindlin, L.N. Kiseleva, N.V. Kruglova, A.A. Kamyshova, P.V. Petrovskii and U. Turpeinen), 257
Reactions of diacetylene ligands with trinuclear clusters. II. Reactions of hexa-2,4-diyne-1,6-diol and 1,4-diphenyl-1,3-butadiyne with $Ru_3(CO)_{12}$ (S.P. Tunik, E.V. Grachova, V.R. Denisov, G.L. Starova, A.B. Nikol'skii, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 339
Ring-methyl activation in pentamethylcyclopentadienyl complexes 7. Reactions of $[Ru(\eta^2{:}\eta^5\text{-}C_5Me_4CH_2O(CH_2)_nCH{=}CHR_2)(CO)_2]^+BF_4^-$ with nucleophiles (O.V. Gusev, L.N. Morozova, T.A. Peganova, M.Yu. Antipin, K.A. Lyssenko, A.F. Noels, S.R. O'Leary and P.M. Maitlis), 191
Synthesis and structure of the heteronuclear alkyne cluster $RuOs_3(\mu_4\text{-}HC_2Me)(CO)_{12}$ (A.A. Koridze, A.M. Sheloumov, F.M. Dolgushin, A.I. Yanovsky, Yu.T. Struchkov and P.V. Petrovskii), 381
The interaction of unsaturated C_4-ring systems with ruthenium carbonyl clusters (D.B. Brown, B.F.G. Johnson, C.M. Martin and S. Parsons), 285

Samarium
Organometallic compounds of the lanthanides. CXV. Donor substituted chiral *ansa*-lanthanidocenes: synthesis of dimethyl(dimethylaminoethylcyclopentadienyl)(tetramethylcyclopentadienyl)-

silane dipotassium and of some chiral *ansa*-metallocene derivatives of Y, Sm, Ho, Er and Lu [2] (H. Schumann, F. Erbstein, R. Weimann and J. Demtschuk), 541

Selection rules
Vibrational spectra and structure of trimethylindium and trimethylthallium (A.P. Kurbakova, S.S. Bukalov, L.A. Leites, L.M. Golubinskaya and V.I. Bregadze), 519

Selenium
Synthesis of diphosphine-substituted selenido carbonyl iron clusters: progressive deformation of the Fe_3Se_2 core in the *nido* clusters $[Fe_3Se_2(CO)_7(\mu\text{-}(Ph_2P)_2R)]$ by widening the bite of the bridging ligand (D. Cauzzi, C. Graiff, M. Lanfranchi, G. Predieri and A. Tiripicchio), 497

Silanol
Synthesis and structure of 3-(cyclohexylamino)propyldimethylsilanol (W. Ziche, B. Herrschaft, F. Hahn, P. John, J. Weis and N. Auner), 375

Silicon
Molecular structure and conformation of trimethylsilylbenzene: a study by gas-phase electron diffraction and theoretical calculations (A.R. Campanelli, F. Ramondo, A. Domenicano and I. Hargittai), 309
Synthesis and crystal structure of enantiomeric *N*-(dimethylfluorosilylmethyl) and *N*-(dimethylchlorosilylmethyl)-[*N*-(*S*)-1-phenylethyl)] acetamides (Yu.I. Baukov, Yu.E. Ovchinnikov, A.G. Shipov, E.P. Kramarova, V.V. Negrebetsky and Yu.T. Struchkov), 399
Synthesis and structure of 3-(cyclohexylamino)propyldimethylsilanol (W. Ziche, B. Herrschaft, F. Hahn, P. John, J. Weis and N. Auner), 375
Vibrational spectra of disilenes. Normal coordinate analysis and identification of the ν(Si=Si) stretching vibration (L.A. Leites, S.S. Bukalov, I.A. Garbuzova, R. West, J. Mangette and H. Spitzner), 425
X-ray study of organic and organoelement compounds of the lanthanides (L.N. Zakharov and Yu.T. Struchkov), 65

Si=Si stretching vibration
Vibrational spectra of disilenes. Normal coordinate analysis and identification of the ν(Si=Si) stretching vibration (L.A. Leites, S.S. Bukalov, I.A. Garbuzova, R. West, J. Mangette and H. Spitzner), 425

Steric effects
Sterically encumbered charge-compensated carbaboranes: synthesis and reactivity. Molecular structures of 7-Ph-11-SMe_2-7,8-*nido*-$C_2B_9H_{10}$ and 1-Ph-3,3-$(CO)_2$-7-SMe_2-3,1,2-*closo*-$RhC_2B_9H_8$ (G.M. Rosair, A.J. Welch, A.S. Weller and S.K. Zahn), 299

Structural chemistry
Novel generation of organometallic systems. Metal carbonyl complexes with silacarbacyclic π-ligands, synthetic and structural investigations (O.B. Afanasova, N.I. Kirillova, E.A. Chernyshev and Yu.T. Struchkov), 31

Sulfido
Antiferromagnetic complexes with the metal–metal bond. XXVIII. Synthesis and molecular structure of the antiferromagnetic cluster $[CpCr(\mu\text{-}SCMe_3)]_2(\mu_4\text{-}S)[PtMe_3(\mu\text{-}I)]_2$ (A.A. Pasynskii, Y.V. Torubaev, S.E. Nefedov, I.L. Eremenko, O.G. Ellert, V.K. Belsky and A.I. Stastch), 433

Superelectrophiles
Polyhalomethanes combined with aluminum halides as generators of superelectrophiles of a novel type (I.S. Akhrem, A.L. Chistyakov, N.P. Gambaryan, I.V. Stankevich and M.E. Vol'pin), 489

Syntheses
Semi-sandwich platinum metals metallacarboranes derived from *nido*-$C_2B_9H_{12}^-$: chemistry and structural studies (I.T. Chizhevsky, A.I. Yanovsky and Yu.T. Struchkov), 51

Tellurium
Synthesis and structure of β-tellurovinylcarbonyl compounds (V.I. Minkin, I.D. Sadekov, B.B. Rivkin, A.V. Zakharov, V.L. Nivorozhkin, O.E. Kompan and Yu.T. Struchkov), 233

Tetraphenylbutadiene
The electrochemical synthesis of η^5-cyclopentadienylcobalt-η^4-tetraphenylbutadiene and its reaction with iodine in the presence of electron donor ligands (V.A. Knizhnikov, V.L. Shirokii, A.N. Ryabtsev and N.A. Maier), 181

Thallium
Vibrational spectra and structure of trimethylindium and trimethylthallium (A.P. Kurbakova, S.S. Bukalov, L.A. Leites, L.M. Golubinskaya and V.I. Bregadze), 519

Thorium
Organometallic chemistry of the actinides. Part 3. Novel 1-aza-allyl- and β-diketiminatothorium chlorides; X-ray structures of $[\{Th(LL')_2(\mu_3\text{-}Cl)(\mu\text{-}Cl)_2K(OEt_2)\}_n]$ and $[Th(LL)_2Cl_2]$ [LL' = $N(SiMe_3)C(Bu^t)C(H)SiMe_3$; LL = $\{N(SiMe_3)C(Ph)\}_2CH$] (P.B. Hitchcock, J. Hu, M.F. Lappert and S. Tian), 473

Tin
Synthesis and characterisation of trifluoro(η^5-*n*-propyltetramethylcyclopentadienyl)metal(IV)-compounds of the elements of Group IV (A. Künzel, E. Parisini, H.W. Roesky and G.M. Sheldrick), 177
The influence of aryl ligands on the chemical hardness of triarylitin cations (D.N. Kravtsov, A.S. Peregudov, V.M. Pachevskaya and L.S. Golovchenko), 385
X-ray study of organic and organoelement compounds of the lanthanides (L.N. Zakharov and Yu.T. Struchkov), 65

Titanium
Novel Group 4b *ansa*-metallocene complexes with the shortest bridge: [1,1'-isopropylydene-3,3'-di-t.Bu-bis(η^5-cyclopentadienyl)] Ti and Zr dichlorides (I.F. Urazowski, L.O. Atovmyan, S.G. Mkoyan, R. Broussier, P. Perron, B. Gautheron and F. Robert), 531
Reactions of the phenyl-substituted five-membered titanacyclocumulene – unusual coupling of a 1,4-disubstituted 1,3-butadiyne with two titanium atoms (V.V. Burlakov, N. Peulecke, W. Baumann, A. Spannenberg, R. Kempe and U. Rosenthal), 293

Transition metal π-Complexes and hydrides
Novel types of hydrogen bonding with transition metal π-complexes and hydrides (E.S. Shubina, N.V. Belkova and L.M. Epstein), 17

Transition metals
Novel generation of organometallic systems. Metal carbonyl complexes with silacarbacyclic π-ligands, synthetic and structural investigations (O.B. Afanasova, N.I. Kirillova, E.A. Chernyshev and Yu.T. Struchkov), 31

Trialkylindium
Vibrational spectra and structure of trimethylindium and trimethylthallium (A.P. Kurbakova, S.S. Bukalov, L.A. Leites, L.M. Golubinskaya and V.I. Bregadze), 519

Trialkylthallium
Vibrational spectra and structure of trimethylindium and trimethylthallium (A.P. Kurbakova, S.S. Bukalov, L.A. Leites, L.M. Golubinskaya and V.I. Bregadze), 519

Triaryltin
The influence of aryl ligands on the chemical hardness of triarylitin cations (D.N. Kravtsov, A.S. Peregudov, V.M. Pachevskaya and L.S. Golovchenko), 385

Trimethylsilyl
Reactions of the phenyl-substituted five-membered titanacyclocumulene – unusual coupling of a 1,4-disubstituted 1,3-butadiyne with two titanium atoms (V.V. Burlakov, N. Peulecke, W. Baumann, A. Spannenberg, R. Kempe and U. Rosenthal), 293

Trimethylsilylbenzene
Molecular structure and conformation of trimethylsilylbenzene: a study by gas-phase electron diffraction and theoretical calculations (A.R. Campanelli, F. Ramondo, A. Domenicano and I. Hargittai), 309

Unsaturated silacarbacycles
Novel generation of organometallic systems. Metal carbonyl complexes with silacarbacyclic π-ligands, synthetic and structural investigations (O.B. Afanasova, N.I. Kirillova, E.A. Chernyshev and Yu.T. Struchkov), 31

12-Vertex boranes
The MM3 force field for 12-vertex boranes and carboranes (T.V. Timofeeva, K.Yu. Suponitsky, A.I. Yanovsky and N.L. Allinger), 481

12-Vertex carboranes
The MM3 force field for 12-vertex boranes and carboranes (T.V. Timofeeva, K.Yu. Suponitsky, A.I. Yanovsky and N.L. Allinger), 481

Vinyl
Synthesis and structure of β-tellurovinylcarbonyl compounds (V.I. Minkin, I.D. Sadekov, B.B. Rivkin, A.V. Zakharov, V.L. Nivorozhkin, O.E. Kompan and Yu.T. Struchkov), 233

White phosphorus
The role of Ni(0) complexes in electrochemical phosphorylation of organic halides. Part 1. Factors determining catalytic activity (Y.H. Budnikova and Yu.M. Kargin), 265

X-ray diffraction
A heterometallic alkoxide combining hard and soft Lewis acids $(Et_3PO)_2Ba_2Cu_4(O^tBu)_8$ (B. Borup, J.C. Huffman and K.G. Caulton), 109
Reactions of the phenyl-substituted five-membered titanacyclocumulene – unusual coupling of a 1,4-disubstituted 1,3-butadiyne with two titanium atoms (V.V. Burlakov, N. Peulecke, W. Baumann, A. Spannenberg, R. Kempe and U. Rosenthal), 293
Structure of a Pt/Re cluster complex: aggregation of ions in crystals of $[Pt_3\{Re(CO)_2P(OMe)_3\}(\mu_3\text{-}O)_2(\mu\text{-dppm})_3][AsF_6]$ (K.W. Muir, L. Manojlovic-Muir and A.A. Torabi), 319
Template synthesis, structure and electrochemistry of trinuclear iron(II) clathrochelate dioximates with ferrocenylboron fragments (Y.Z. Voloshin, T.E. Kron, V.K. Belsky, V.E. Zavodnik, Yu.A. Maletin and S.G. Kozachkov), 207

X-ray diffraction studies
Semi-sandwich platinum metals metallacarboranes derived from *nido*-$C_2B_9H_{12}^-$: chemistry and structural studies (I.T. Chizhevsky, A.I. Yanovsky and Yu.T. Struchkov), 51
Ligand effects in the hydrogenation of methacycline to doxycycline and epi-doxycycline catalysed by rhodium complexes. Molecular structure of the key catalyst [*closo*-3,3-(η^{2,3}-$C_7H_7CH_2$)-3,1,2-$RhC_2B_9H_{11}$] (A. Felekidis, M. Goblet-Stachow, J.F. Liégeois, B. Pirotte, J. Delarge, A. Demonceau, M. Fontaine, A.F. Noels, I.T. Chizhevsky, T.V. Zinevich, V.I. Bregadze, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 405

X-ray structure
Chelating organophosphines: the use of comparative structural investigations to determine ligand properties (J. Bruckmann and C. Krüger), 465
Organometallic compounds of the lanthanides. CXV. Donor substituted chiral *ansa*-lanthanidocenes: synthesis of dimethyl(dimethylaminoethylcyclopentadienyl)(tetramethylcyclopentadienyl)-silane dipotassium and of some chiral *ansa*-metallocene derivatives of Y, Sm, Ho, Er and Lu [2] (H. Schumann, F. Erbstein, R. Weimann and J. Demtschuk), 541
Polyelement substituted cyclopentadienes and indenes – novel ligand precursors for organotransition metal chemistry (K. Rufanov, E. Avtomonov, N. Kazennova, V. Kotov, A. Khvorost, D. Lemenovskii and J. Lorberth), 361
Reactions of diacetylene ligands with trinuclear clusters. II. Reactions of hexa-2,4-diyne-1,6-diol and 1,4-diphenyl-1,3-butadiyne with $Ru_3(CO)_{12}$ (S.P. Tunik, E.V. Grachova, V.R. Denisov, G.L. Starova, A.B. Nikol'skii, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov), 339
X-ray structures of decamethylplatinocene dication in the crystal of $[Pt(\eta^5\text{-}C_5Me_5)_2]^{2+}(PF_6^-)_2$ and decamethyliridocenium cation in the crystal of $[Ir(\eta^5\text{-}C_5Me_5)_2]^+(BPh_4^-)\cdot CH_2Cl_2$ (Yu.T. Struchkov, M.Yu. Antipin, K.A. Lyssenko, O.V. Gusev, T.A. Peganova and N.A. Ustynyuk), 281

X-ray study
Synthesis and crystal structure of enantiomeric *N*-(dimethylfluorosilylmethyl) and *N*-(dimethylchlorosilylmethyl)-[*N*-(*S*)-1-phenylethyl)] acetamides (Yu.I. Baukov, Yu.E. Ovchinnikov, A.G. Shipov, E.P. Kramarova, V.V. Negrebetsky and Yu.T. Struchkov), 399

Yttrium
Organometallic compounds of the lanthanides. CXV. Donor substituted chiral *ansa*-lanthanidocenes: synthesis of dimethyl(dimethylaminoethylcyclopentadienyl)(tetramethylcyclopentadienyl)-silane dipotassium and of some chiral *ansa*-metallocene derivatives of Y, Sm, Ho, Er and Lu [2] (H. Schumann, F. Erbstein, R. Weimann and J. Demtschuk), 541

Zirconium
Novel Group 4b *ansa*-metallocene complexes with the shortest bridge: [1,1'-isopropylydene-3,3'-di-t.Bu-bis(η^5-cyclopentadienyl)] Ti and Zr dichlorides (I.F. Urazowski, L.O. Atovmyan, S.G. Mkoyan, R. Broussier, P. Perron, B. Gautheron and F. Robert), 531